

Science, Technology and Innovation

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Federal Influences on Research Collaboration

- Science is still “the endless frontier”
 - Continuing support for basic/investigator-initiated research
- New emphasis on economic impacts:
 - NIH i6 Challenge
 - DOE Energy Innovation Hubs
 - White House Innovation RFI

State Influences on Research Collaboraton

Directly tied to strengthening state economies

- Every state has a technology development strategy and related programs
- National Governor's Association's Innovation America initiative
- New York's
 - New York State Foundation for Science, Technology, Academic Research and Innovation
 - Empire State Development Corporation
 - New York State Energy Research and Development Authority
 - Empire State Stem Cell Trust Fund

Regional Perspective: Long Island Model

- Major research universities are the growth engines of innovative, economically successful regions.
- Long Island
 - Bicounty region's population, 2.8M, > 19 states
 - \$120 billion gross metropolitan product
 - 120 miles long; 1,200 mile coastline
- With the national downsizing of the defense industry, Long Island's economy lost its growth engine.
 - New industries targeted for growth rely on intellectual/scientific and industry/technology resources -- biotech, micro/nano-electronics, wireless/software/IT, alternative energy

Industry Incentives for Collaboration

Gain:

- Talent pool, versatile lifelong training source
- Partner for joint funding proposals
- Innovation for competitiveness
 - New technologies
 - New technology-based enterprises
 - New/retained jobs
- Degree, non-credit, on-/off-site, distance learning
- Magnet for talent and vision

University Incentives

Gain:

- Collaborative R&D support/experience
- Graduate student support, interesting problems to solve
- Industry partners/expertise/facilities for joint proposals
- Future support from grateful partners
- Public support for tangible societal contributions

University-Industry-Government Collaborations

- NYS Center of Excellence in Wireless and Information Technology
- Advanced Energy Center



University-Industry-Government –International Collaborations

- CEWIT Korea



Economic Return on Industry-University Collaboration Within A Region



STONY BROOK OFFERS “CRADLE TO FORTUNE 500” SUITE OF MULTI-DISCIPLINARY ECONOMIC DEVELOPMENT PROGRAMS

“Basic”

“Applied/Commercial”

- ☐ **R&D Collaborations and Technology Development**
 - ☐ D.O.E. EFRC (Energy Frontier Research Center) in Chemical Energy Storage
 - ☐ 3 NSF IUCRCs (Analog-Digital Circuits, Bio-Energy R&D, Information Protection)
 - ☐ 2 NSF MRSECs (Polymers, Thermal Spray)
 - ☐ NSF Center for Environmental Molecular Science
 - ☐ NYS Centers for Advanced Technology (CATs) – Medical Biotechnology, Sensor Systems
 - ☐ NYS Center of Excellence in Wireless/Information Technologies (CEWIT, opened Spring 2009), NYS STAR Center in Biomolecular Diagnostics and Therapeutics (STAR Center, opened Fall 2009), Advanced Energy Research and Technology Center (AERTC, opening Summer 2010)
- ☐ **Advanced Technology Assistance**
 - ☐ Strategic Partnership for Industrial Resurgence (SPIR) Access to all engineering disciplines for companies in all technology industry sectors
 - ☐ NSF IUCRCs, NYS CATs, CoE, STAR Center, AERTC
- ☐ **Technology Licensing**
- ☐ **Business Management Assistance** – Small Business Development Center, College of Business
- ☐ **Management and Workforce Training** – Center for Emerging Technologies, School for Professional Development, College of Business, many part-time Masters programs
- ☐ **Incubation and New Enterprise Development**
 - ☐ Long Island High Technology Incubator
 - ☐ Stony Brook New Business Incubator at Calverton
 - ☐ Incubation facilities in CEWIT, AERTC (Clean Energy Business Incubator Program)
 - ☐ Access to early-stage capital (Long Island Angel Network)

Report Dean of Engineering
Report Vice President for Research
Report other

Stony Brook Cumulative Results

- 17,000 jobs created/saved
- More than \$600 million in additional corporate revenues
- More than 2,200 projects completed
- More than \$100 million joint federal awards
- Dozens of companies started/remain in-region